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DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
[60Day-15-15EC]
Proposed Data Collections Submitted for
Public Comment and Recommendations

The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995. To request more information on the below proposed project or to obtain a copy of the information collection plan and instruments, call 404-639-7570 or send comments to Leroy A. Richardson, 1600 Clifton Road, MS-D74, Atlanta, GA 30333 or send an email to omb@cdc.gov.

Comments submitted in response to this notice will be summarized and/or included in the request for Office of Management and Budget (OMB) approval. Comments are invited on:

- (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility;
- (b) the accuracy of the agency's estimate of the burden of the

proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; to develop, acquire, install and utilize technology and systems for the purpose of collecting, validating and verifying information, processing and maintaining information, and disclosing and providing information; to train personnel and to be able to respond to a collection of information, to search data sources, to complete and review the collection of information; and to transmit or otherwise disclose the information. Written comments should be received within 60 days of this notice.

Proposed Project

Improving Organizational Management and Worker Behavior through Worksite Communication – New - National Institute for Occupational Safety and Health (NIOSH), Centers for Disease

Control and Prevention (CDC).

Background and Brief Description

NIOSH, under P.L. 91-596, Sections 20 and 22 (Section 20-22, Occupational Safety and Health Act of 1977) has the responsibility to conduct research relating to innovative methods, techniques, and approaches dealing with occupational safety and health problems.

This research assesses best practices for communicating and employing a strategic health and safety management system (HSMS) to facilitate workers' health and safety behaviors, including ways that lateral communication from management influences worker perceptions and behaviors. Currently, ambivalence exists about how to strategically communicate aspects of an HSMS top-down in the mining industry. Research indicates that, to answer questions about effectively using an HSMS to improve safety, research needs to follow a sample of workplaces over time, measuring the introduction or utilization of an HSMS and then measuring outcomes of interest at the workplace level and at the worker-level too.

Therefore, analyzing workers' perception of the organizational HSMS, leaders' implementation of the organizational HSMS, and communication gaps between these two entities, may provide more insight into the best, most feasible

practices and approaches to worker H&S performance within a system. This project is initiating such an approach by implementing a series of multilevel intervention (MLI) case studies that assess the utility of a safety system that includes aspects of both safety management on the organizational level and behavior-based safety on the worker level. By studying these levels separately and introducing an intervention to bridge these two groups together to enhance safety, the communication practices within an HSMS may be enhanced.

NIOSH requests OMB approval for a 3-year for a project that involves information collection and that seeks to empirically understand what HSMS communication practices are important for mine worker H&S and how those practices can be developed, implemented, and maintained over time via desired communication from mine site leadership. The following questions guide this study:

What impact does the MLI communication model that was designed and implemented have on: (1) workers' health/safety behaviors, including those that lower exposure to dust; (2) workers' perceptions of their organizations' values; and (3) changes in managers' strategic HSMS communication and implementation with workers to facilitate health/safety performance, including those that lower exposure to dust.

To answer the above questions, NIOSH researchers developed

a multilevel intervention (MLI) that focuses on both management and workers' communication about and subsequent actions taken to reduce respirable dust exposure over time. This MLI will inform how leadership communicates to their employees and what affect(s) this communication has on individual behavior such as corrective dust actions taken by workers. By assessing the ongoing safety/health interactions between individual workers and their organizational capacities (i.e. levels of leadership and management of safety), and how these interactions influence and shape personal H&S performance, we can better understand what aspects of both systems need attention in a merged, more balanced and comprehensive system of health and safety management (DeJoy, 2005).

Specifically, this project is using mine technology, the Helmet-CAM, as a communication medium to help merge these two worksite systems. Previous research indicates that the use of information technology can enhance lateral and horizontal communication within organizations, showing support for using the Helmet-CAM in the current study (Hinds & Kiesler, 1995). NIOSH researchers can analyze what and how communication practices should be implemented to influence worker perceptions of their organizations' H&S values and how this impacts their subsequent H&S behavior. Eventually, the practices used to influence behavior related to this dust issue can be

extrapolated to inform ways to communicate about and manage additional health/safety problems within the industry via an HSMS as implemented by site leaders.

The Helmet-CAM incorporates video footage and real-time dust measurements of workers while performing their job duties and tasks in various locations throughout the workday. This technology has proven to be a very viable assessment tool to provide a comparison of where and when miners are being exposed to their highest respirable dust concentrations. As a result, Helmet-CAM technology is being employed at many mines as a way to identify dust exposures of workers and to help reduce dust hazards in the environment. However, we do not yet know how mine site management is using, if at all, this technology to communicate with workers about their personal health and safety barriers and behaviors. Discussions about the tasks workers perform when exposure levels are high and what actions they can take to reduce their dust exposure may be valuable to the industry in helping advance the way engineering-control technology is used from a behavioral vantage point as well.

The MLI is designed to help mine workers and organizational leadership work together, using the Helmet-CAM to bridge their communication efforts, to lower exposure to respirable dust among other H/S behaviors. Previous research (Yorio et al. 2014) identified three distinct areas that influence the relationship

between the strategic HSMS and its overall success in implementing and encouraging worker behavior change: worksite leadership, organizational values, and worker perceptions and interpretations of management. Data on these three contingencies are collected from the management and worker levels during three time points throughout a six-week intervention to assess the ongoing communication via the Helmet-CAM and effects of the communication on behavior. Data collection and analysis pertaining to these three areas may occur via a pre/post survey with workers and pre/mid/post interviews/focus groups with workers and mine site leaders, some of which include dialogue around Helmet-CAM footage as provided by the workers who choose to participate.

NIOSH proposes this intervention design at a minimum of three and no more than five industrial mineral metal/nonmetal mine sites. All of the data collection instruments have been used in previous studies to examine worker and leadership variables and factors. Therefore, NIOSH knows that the data collection instruments are valid and reliable to use in studying the worker and leader levels simultaneously, within the same mine. Industrial mineral sites will be recruited who have inquired interest in learning how to use the Helmet-CAM on their site and/or interest in improving their site wide communication efforts. Only a small sample of workers will participate at each

mine site because of the time required for completion and to ensure the longitudinal data can be adequately collected over the six weeks. In other words, we would rather collect data multiple times with the same worker and have fewer participants than collect data from more workers but not have the ability to appropriately follow-up during the subsequent two visits.

Data collection will take place with no more than 150 mine workers and 30 mine site leaders over three years. The respondents targeted for this study include any active mine worker and any active site leader at an industrial mineral metal/nonmetal mine site. It is estimated that a sample of up to 150 mine workers will participate in the intervention, which includes wearing the Helmet-CAM for a portion of their job tasks (no more than two hours total) during three time periods (when NIOSH is present during the field visit). In addition to wearing the Helmet-CAM, workers will be asked to complete a pre and post-test survey (~15 minutes) and an interview during three time points throughout the study (~ 30 minutes). The interviews also will debrief Helmet-CAM footage with participants at various mining operations who have agreed to participate. It also is estimated that a sample of up to 30 mine site leaders will participate in interviews/focus groups about HSMS practices at the same mining operations which have agreed to participate. The interviews/focus groups also will occur three times during

each of the NIOSH field visits and will take no more than 45 minutes each. All participants will be between the ages of 18 and 75, currently employed, and living in the United States. Participation will require no more than 4.5 hours of workers' time over the six-week intervention and no more than 2.5 hours of site leaders' time over the six-week intervention period.

There is no cost to respondents other than their time.

Estimated Annualized Burden Hours

Type of Respondent	Form Name	Number of Respondents	Number of Responses per respondent	Average Burden per Response (in hours)	Total Burden Hours
Mine Site Leaders/Managers	Mine Recruitment Script	10	1	5/60	1
	Initial/Mid/Post HSMS interview or focus group	10	3	45/60	23
Mine Worker	Individual Miner Recruitment Script	50	1	5/60	4
	Pre/Post Org Perceptions Survey	50	2	15/60	25
	Wear Helmet-CAM during job cycle	50	3	1	150
	Pre/Mid/Post Behavior and Helmet-CAM footage Interview	50	3	30/60	75
Total					278

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